

**What Is Claimed Is:**

1           1.       A method for using faceted metadata to facilitate navigation  
2 through information resources, comprising:  
3           receiving a query from a client at a server;  
4           performing the query on metadata, wherein the metadata contains facets  
5 that describe characteristics of the information resources, and wherein performing  
6 the query generates results that identify information resources that satisfy the  
7 query;  
8           constructing a response containing the results, the query, and suggestions  
9 on how to refine the query; and  
10          sending the response to the client, thereby allowing the client to refine the  
11 query;  
12          whereby the client and server can work together in a stateless manner to  
13 refine the query without having to maintain state information about the query on  
14 the server.

1           2.       The method of claim 1, wherein the suggestions on how to refine  
2 the query include suggested values for facets of the metadata.

1           3.       The method for claim 2, wherein the suggested values can include  
2 frequently occurring values for facets of the metadata.

1           4.       The method of claim 1, wherein the suggestions can include  
2 instructions on how to display the suggestions to a user.

1           5.       The method of claim 1, further comprising:

2 receiving the response from the server at the client;  
3 displaying the results and the suggestions on how to refine the query to a  
4 user associated with the client;  
5 upon receiving a command from the user to modify the query,  
6 modifying the query in accordance with the command to  
7 generate a new query, and  
8 sending the new query from the client to the server.

1 6. The method of claim 5, wherein modifying the query in accordance  
2 with the command can involve:  
3 using one of the suggestions to define a new query term;  
4 defining a new query term that is not associated with one of the  
5 suggestions; and  
6 removing a query term from the query.

1 7. The method of claim 6, wherein defining a new query term that is  
2 not associated with one of the suggestions can involve defining a new text search  
3 query term.

1 8. The method of claim 5, wherein displaying the results and the  
2 suggestions further involves displaying a representation of the state of the query to  
3 the user.

1 9. The method of claim 1, wherein the query can contain:  
2 a specification of facets to be used in organizing the results; and  
3 conditions that results must satisfy.

1           10.    The method of claim 1, further comprising automatically creating  
2 an initial query by:  
3           scanning through facets of the metadata;  
4           generating suggestions for facets that have commonly occurring values;  
5 and  
6           allowing a user to select one or more of the suggestions to create the initial  
7 query.

1           11.    The method of claim 1, wherein the suggestions on how to refine  
2 the query can additionally specify frequencies for commonly occurring values of  
3 facets in the metadata.

1           12.    The method of claim 1, wherein prior to receiving the query, the  
2 method further comprises initializing a database containing the metadata by:  
3           receiving the metadata in Resource Description Framework (RDF) format;  
4 and  
5           storing the metadata in the database.

1           13.    The method of claim 1, wherein the query and the response are  
2 encoded in eXtensible Markup Language (XML) documents that are transferred  
3 between the client and the server.

1           14.    The method of claim 1, wherein the format of the query and the  
2 response are specified by a query language that facilitates navigation using faceted  
3 metadata.

1           15.     A computer-readable storage medium storing instructions that  
2     when executed by a computer cause the computer to perform a method for using  
3     faceted metadata to facilitate navigation through information resources, the  
4     method comprising:  
5           receiving a query from a client at a server;  
6           performing the query on metadata, wherein the metadata contains facets  
7     that describe characteristics of the information resources, and wherein performing  
8     the query generates results that identify information resources that satisfy the  
9     query;  
10          constructing a response containing the results, the query, and suggestions  
11     on how to refine the query; and  
12          sending the response to the client, thereby allowing the client to refine the  
13     query;  
14          whereby the client and server can work together in a stateless manner to  
15     refine the query without having to maintain state information about the query on  
16     the server.

1           16.     The computer-readable storage medium of claim 15, wherein the  
2     suggestions on how to refine the query include suggested values for facets of the  
3     metadata.

1           17.     The computer-readable storage medium for claim 16, wherein the  
2     suggested values can include frequently occurring values for facets of the  
3     metadata.

1           18.     The computer-readable storage medium of claim 15, wherein the  
2     suggestions can include instructions on how to display the suggestions to a user.

1           19.    The computer-readable storage medium of claim 15, wherein the  
2 method further comprises:  
3           receiving the response from the server at the client;  
4           displaying the results and the suggestions on how to refine the query to a  
5 user associated with the client;  
6           upon receiving a command from the user to modify the query,  
7                        modifying the query in accordance with the command to  
8           generate a new query, and  
9                        sending the new query from the client to the server.

1           20.    The computer-readable storage medium of claim 19, wherein  
2 modifying the query in accordance with the command can involve:  
3           using one of the suggestions to define a new query term;  
4           defining a new query term that is not associated with one of the  
5 suggestions; and  
6           removing a query term from the query.

1           21.    The computer-readable storage medium of claim 20, wherein  
2 defining a new query term that is not associated with one of the suggestions can  
3 involve defining a new text search query term.

1           22.    The computer-readable storage medium of claim 19, wherein  
2 displaying the results and the suggestions further involves displaying a  
3 representation of the state of the query to the user.

1           23.     The computer-readable storage medium of claim 15, wherein the  
2 query can contain:

3           a specification of facets to be used in organizing the results; and  
4           conditions that results must satisfy.

1           24.     The computer-readable storage medium of claim 15, wherein the  
2 method further comprises automatically creating an initial query by:

3           scanning through facets of the metadata;

4           generating suggestions for facets that have commonly occurring values;

5           and

6           allowing a user to select one or more of the suggestions to create the initial  
7 query.

1           25.     The computer-readable storage medium of claim 15, wherein the  
2 suggestions on how to refine the query can additionally specify frequencies for  
3 commonly occurring values of facets in the metadata.

1           26.     The computer-readable storage medium of claim 15, wherein prior  
2 to receiving the query, the method further comprises initializing a database  
3 containing the metadata by:

4           receiving the metadata in Resource Description Framework (RDF) format;

5           and

6           storing the metadata in the database.

1           27.     The computer-readable storage medium of claim 15, wherein the  
2 query and the response are encoded in eXtensible Markup Language (XML)  
3 documents that are transferred between the client and the server.

1           28.     The computer-readable storage medium of claim 15, wherein the  
2     format of the query and the response are specified by a query language that  
3     facilitates navigation using faceted metadata.

1           29.     An apparatus for using faceted metadata to facilitate navigation  
2     through information resources, comprising:  
3           a receiving mechanism configured to receive a query from a client at a  
4     server;  
5           a database configured to perform the query on metadata, wherein the  
6     metadata contains facets that describe characteristics of the information resources,  
7     and wherein performing the query generates results that identify information  
8     resources that satisfy the query; and  
9           a response generation mechanism configured to,  
10                 construct a response containing the results, the query, and  
11                 suggestions on how to refine the query, and to  
12                 send the response to the client, thereby allowing the client  
13                 to refine the query;  
14           whereby the client and server can work together in a stateless manner to  
15     refine the query without having to maintain state information about the query on  
16     the server.

1           30.     The apparatus of claim 29, wherein the suggestions on how to  
2     refine the query include suggested values for facets of the metadata.

1           31.     The apparatus for claim 30, wherein the suggested values can  
2     include frequently occurring values for facets of the metadata.

1           32.    The apparatus of claim 29, wherein the suggestions can include  
2 instructions on how to display the suggestions to a user.

1           33.    The apparatus of claim 29, further comprising a query generation  
2 mechanism on the client configured to:  
3           receive the response from the server;  
4           display the results and the suggestions on how to refine the query to a user;  
5 and  
6           upon receiving a command from the user to modify the query, to  
7                        modify the query in accordance with the command to  
8                        generate a new query, and to  
9                        send the new query from the client to the server.

1           34.    The apparatus of claim 33, wherein while modifying the query in  
2 accordance with the command the query generation mechanism can:  
3           use one of the suggestions to define a new query term;  
4           define a new query term that is not associated with one of the suggestions;  
5 and  
6           remove a query term from the query.

1           35.    The apparatus of claim 34, wherein while defining a new query  
2 term that is not associated with one of the suggestions, the query generation  
3 mechanism can define a new text search query term.



1           36.     The apparatus of claim 33, wherein while displaying the results and  
2     the suggestions, the query generation mechanism is additionally configured to  
3     displaying a representation of the state of the query to the user.

1           37.     The apparatus of claim 29, wherein the query can contain:  
2             a specification of facets to be used in organizing the results; and  
3             conditions that results must satisfy.

1           38.     The apparatus of claim 29, further comprising an initial query  
2     generation mechanism that is configured to:  
3             scan through facets of the metadata;  
4             generate suggestions for facets that have commonly occurring values; and  
5     to  
6             allow a user to select one or more of the suggestions to create the initial  
7     query.

1           39.     The apparatus of claim 29, wherein the suggestions on how to  
2     refine the query can additionally specify frequencies for commonly occurring  
3     values of facets in the metadata.

1           40.     The apparatus of claim 29, further comprising a database  
2     initialization mechanism that is configured to:  
3             receive the metadata in Resource Description Framework (RDF) format;  
4     and to  
5             store the metadata in a database.

1           41.     The apparatus of claim 29, wherein the query and the response are  
2 encoded in eXtensible Markup Language (XML) documents that are transferred  
3 between the client and the server.

1           42.     The apparatus of claim 29, wherein the format of the query and the  
2 response are specified by a query language that facilitates navigation using faceted  
3 metadata.

1           43.     A means for using faceted metadata to facilitate navigation through  
2 information resources, comprising:  
3           a receiving means for receiving a query from a client at a server;  
4           a database means for performing the query on metadata, wherein the  
5 metadata contains facets that describe characteristics of the information resources,  
6 and wherein performing the query generates results that identify information  
7 resources that satisfy the query;  
8           a response generation means for generating a response containing the  
9 results, the query, and suggestions on how to refine the query; and  
10          a sending means for sending the response to the client, thereby allowing  
11 the client to refine the query;  
12          whereby the client and server can work together in a stateless manner to  
13 refine the query without having to maintain state information about the query on  
14 the server.